

Name \_\_\_\_\_

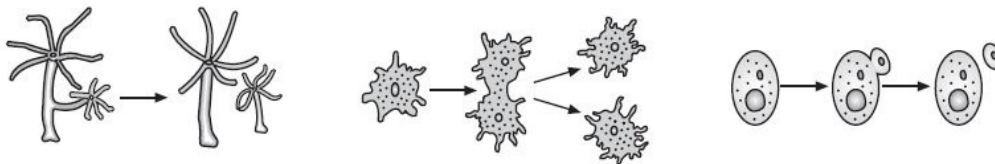
## Keystone Warm-ups

### Chapter 10: Cell Growth and Division

*Copy down all 4 answer choices for the daily warm-up from the board in the space below its question. Choose the best answer by circling its letter. Then, after we go over it, write the correct answer in the block provided on the front of the packet.*

1	2	3	4
5	6	7	8
9	10	11	

1. The diagrams below illustrate types of asexual reproduction.



Which statement correctly describes the offspring?

- (A) They vary genetically from the parent.
- (B) They are produced by the union of gametes.
- (C) They obtain nourishment from a placenta.
- (D) They result without the union of gametes.

2. In animals, the normal development of an embryo is dependent on

- (A) fertilization of a mature egg by many sperm cells
- (B) production of new cells having twice the number of chromosomes as the zygote
- (C) production of body cells having half the number of chromosomes as the zygote
- (D) mitosis and the differentiation of cells after fertilization has occurred



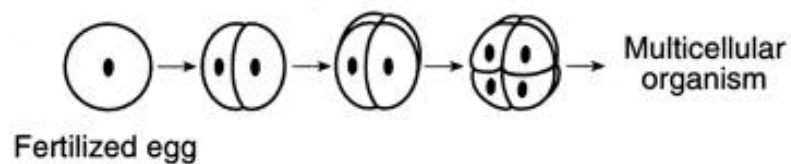
3. A chemical known as 5-bromouracil causes a mutation that results in the mismatching of molecular bases in DNA. The offspring of organisms exposed to 5-bromouracil can have mismatched DNA if the mutation occurs in

- (A) the skin cells of the mother
- (B) the gametes of either parent
- (C) all the body cells of both parents
- (D) only the nerve cells of the father

4. Certain bacteria produce a chemical that makes them resistant to penicillin. Since these bacteria reproduce asexually, they usually produce offspring that

- (A) can be destroyed by penicillin
- (B) mutate into another species
- (C) are genetically different from their parents
- (D) survive exposure to penicillin

5. Which phrase best describes a process represented in the diagram below?



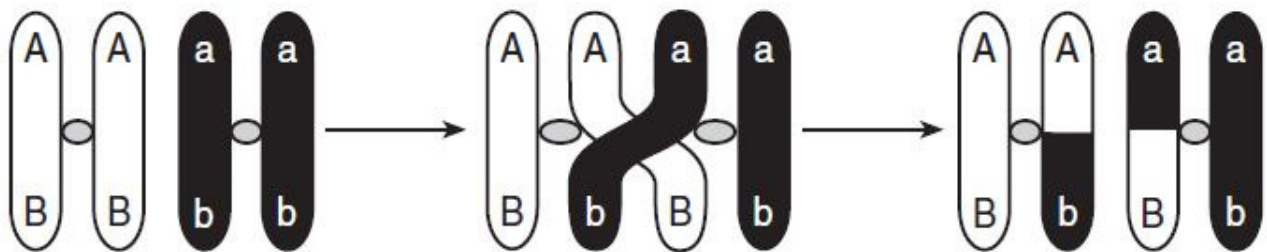
- (A) a zygote dividing by mitosis
- (B) a zygote dividing by meiosis
- (C) a gamete dividing by mitosis
- (D) a gamete dividing by meiosis



6. In sexually reproducing species, the number of chromosomes in each body cell remains the same from one generation to the next as a direct result of

- (A) meiosis and fertilization
- (B) mitosis and mutation
- (C) differentiation and aging
- (D) homeostasis and dynamic equilibrium

7. The diagram below shows a process that affects chromosomes during meiosis.



This process can be used to explain

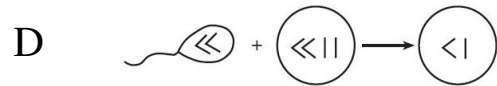
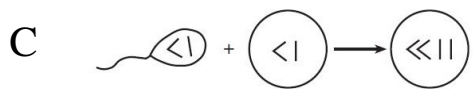
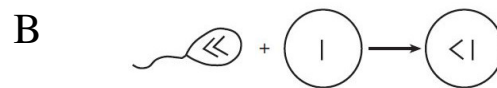
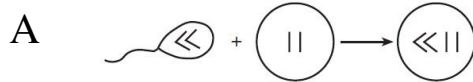
- (A) why some offspring are genetically identical to their parents
- (B) the process of differentiation in offspring
- (C) why some offspring physically resemble their parents
- (D) the origin of new combinations of traits in offspring



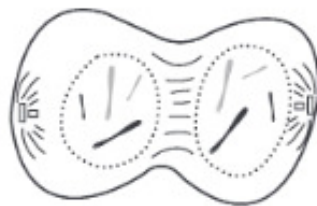
8. The diagram to the right represents a nucleus containing the normal chromosome number for a species.



Which diagram below best illustrates the normal formation of a cell that contains all of the genetic information needed for growth, development, and future reproduction of this species?



9. Which statement best describes the phase of the cell cycle shown below ?



- (A) The cell is in prophase of mitosis because the number of chromosomes has doubled.
- (B) The cell is in prophase I of meiosis because the number of chromosomes has doubled.
- (C) The cell is in telophase of mitosis because the cell is separating and contains two copies of each chromosome.
- (D) The cell is in telophase of meiosis because the cell is separating and contains two copies of each chromosome.



10. Which statement is true of both mitosis and meiosis?

- (A) Both are involved in asexual reproduction.
- (B) Both occur only in reproductive cells.
- (C) The number of chromosomes is reduced by half.
- (D) DNA replication occurs before the division of the nucleus.

11. Mitosis and meiosis are processes by which animal and plant cells divide. Which statement best describes a difference between mitosis and meiosis?

- (A) Meiosis is a multi-step process.
- (B) Mitosis occurs only in eukaryotic cells.
- (C) Meiosis is used in the repair of an organism.
- (D) Mitosis produces genetically identical daughter cells.